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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,592	05/30/2001	Akira Arai	9319A-000221	8566

27572 7590 02/25/2003

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P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/25/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,592

Applicant(s)

ARAI ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 10 and 13 to 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Croat (US Patent No. 4,851,058, cited by the applicants in the IDS submitted August 31, 2001) in view of Toshio et al. (Toshio, Japanese Patent Document No. 09-271909).

Croat teaches a method of making a magnetic material having a composition that overlaps the alloy composition recited in the instant claims (column 2, lines 15 to 30). Croat's method comprises melt spinning (column 4, lines 18 to 58), that is, "by colliding a molten alloy to a circumferential surface of a cooling roll so as to be cooled and solidify it" (applicants' claim 1, lines 2 to 4).

Toshio teaches a cooling roll for manufacturing a ribbon shaped metal alloy material wherein the cooling roll has a grooved surface so as to prevent the formation of air pockets, that is, dimples, produce a more uniform product and to improve the magnetic and mechanical properties of the ribbon metal alloy (English language abstract first paragraph). Toshio teaches that the grooves are 0.1 to 50 microns wide

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and have a depth of about 10 microns or more. Toshio teaches that the groove width of 0.1 to 50 microns is such that the molten metal does not enter the groove (See paragraph 13 of the English language translation submitted by the applicants).

Croat and the claimed process differ in that Croat does not teach the presence of "dimple correcting means" as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have been motivated to modify Croat's cooling roll to a cooling roll having a grooved surface so as to prevent the formation of air pockets, that is, dimples, produce a more uniform product and to improve the magnetic and mechanical properties of the ribbon metal alloy as taught by Toshio (English language abstract first paragraph).

3. Claims 2, 3 and 5 to 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Croat taken in view of Toshio as applied to claims 1, 10 and 13 to 16 as set forth above, and further in view of Fukuno (Fukuno, US Patent No. 5,665,177, cited by the applicants in the IDS submitted May 30,2001).

Croat and Toshio teach and are applied as set forth above.

Fukuno teaches a cooling roll for manufacturing a ribbon shaped metal alloy material wherein the cooling roll has a grooved surface. Fukuno teaches that to minimize variation in the crystal size of the product, that is, to make a more uniform product, the cooling roll is preferably comprised of a base and a surface layer (column 6, lines 65 to 67). Fukuno teaches that the outer surface layer on the cooling roll should have a thermal conductivity lower than the thermal conductivity of the cooling roll base (column 7, lines 1 to 7) as recited in applicants' claim 3. Fukuno teaches a thermal

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conductivity of the cooling roll outer surface that overlaps applicants' claim 5 (column 7, lines 3 to 6). Fukuno teaches a cooling roll surface layer having a thickness of 10 to 100 microns (column 7, lines 18 to 20).

The claims and the combination Croat and Toshio differ in that Croat and Toshio do not teach a cooling roll comprised of a base and a surface layer nor do the references teach the thermal expansion coefficient as recited in applicants' claim 6.

However, one of ordinary skill in the art at the time the invention was made would have been motivated to modify Toshio's cooling roll to a cooling roll having a base and a surface coating so as to minimize the variation in crystal grain size and make the product more uniform as taught by Fukuno. Further, the determination of an appropriate thermal expansion coefficient for the surface layer of the cooling roll is considered well within the skill of one of ordinary skill in the art.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8, 10 and 13 to 17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 18 of copending Application No. 09/833,805. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed process in each of these two sets of claims overlap. Both sets of claims are directed to a method of making a magnetic material having the same composition, by a process of melt spinning, that is, "by colliding a molten alloy to a circumferential surface of a cooling roll so as to be cooled and solidify it" (applicants' claim 1, lines 2 to 4)". The instant claims recite the presence of "dimple correcting means" while the claims in 09/833,805 recite the presence of "gas expelling means". However, each of these terms encompasses the presence of grooves on the cooling rolls. Accordingly, these two sets of claims are considered to overlap. In view of this overlap, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because where the claims overlap a prima facie case of obviousness exists, MPEP 2144.05.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

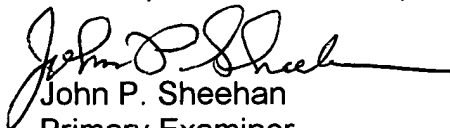
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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


John P. Sheehan
Primary Examiner
Art Unit 1742

jps
February 23, 2003